

A FEASIBILITY STUDY FOR THE DEVELOPMENT  
OF A VILLAGE FOR CEREBRAL PALSY VICTIMS

by

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## INTRODUCTION

Cerebral palsy is the name given to a number of medical conditions resulting from brain damage. These conditions are normally characterized by nerve and muscle dysfunction. Damage can be so minor that it shows itself as only a slight awkwardness in gait or speech. Or, it may be manifested as total inability to use limbs; loss of speech, hearing, or eyesight; or mental retardation. One of the major problems is that in many cases several of these symptoms may be present.

Cerebral palsy is caused by damage to the brain. While this damage normally occurs before or during birth, it may occur at any time in life.

Cerebral palsy can be caused by any number of factors: poor prenatal health of the mother; a viral infection during early pregnancy; RH condition; lack of oxygen at birth; or premature birth. Cerebral palsy can also be the result of an accident in early childhood or the result of lead poisoning.

It is difficult to determine how many cerebral palsied persons are in the region or in the state of Kansas for several reasons. Cerebral palsy is not uniformly reported by doctors. In many cases cerebral palsy is not diagnosed until the child is several years old. Often when multiple handicaps exist, the condition is referred to as the most obvious handicap such as blindness or mental retardation. In mild cases cerebral palsy may never be diagnosed and, if diagnosed, it is often

unreported or not acknowledged. Inaccurate reporting of cases has made accurate determinations impossible. Therefore, estimates of occurrence differ greatly. These estimates range from less than one per thousand to over six per thousand.

Based upon estimates of the United Cerebral Palsy Association, there are 1800 cerebral palsied persons within a sixty-mile radius of the proposed cerebral palsy village. Of these, 1200 are in need of some service for the cerebral palsied. The other 600 are either too severely afflicted to be helped or the damage is so slight, special services are not needed. On a statewide basis there are estimated to be 7500 cerebral palsied, 4500 of whom are in need of some services for the cerebral palsied. It is estimated that there are 750,000 cerebral palsied in the United States and that there are 25,000 new cases of cerebral palsy each year.

The problem of sheer numbers is compounded by the lack of adequate facilities for the cerebral palsied.

"Most general rehabilitation centers fail to provide adequate service to the cerebral palsied patient, apparently because there are so many patients with other disabilities who respond more fully and quickly to rehabilitation efforts, that the prolonged and intensive service needed by those with multiple involvements, such as is the case with cerebral palsied persons, results in their virtual exclusion."<sup>1</sup>

The problem then is one of developing a facility capable of meeting the needs of the cerebral palsied of Kansas.

<sup>1</sup>William M. Cruickshank, Cerebral Palsy: Its Individual and Community Problems (Syracuse, N.Y., 1966), p. 648.

The purpose of this study is to provide several concepts for the development of a village for the cerebral palsied and to determine the feasibility of such a project.

## HISTORY OF DEVELOPMENT TO DATE

The Kansas Jaycees' camping program for the handicapped was founded in 1963 by a group of Jaycees who wanted a continuing program to benefit children who were not receiving recreational benefits from other sources. Through consultation with the personnel of the United Cerebral Palsy Association of Kansas, they learned cerebral palsied children of the state were not participating in any type of recreational program. Many of these children had never been away from home, even to attend any special training school. Many parents of these children had never had the opportunity to take even a day's vacation.

The Jaycees began their camping program in 1964, leasing a camp and utilizing volunteer staff to provide recreational programs for cerebral palsied children. Campers attended the camp on donated sponsorships from many of the Kansas Jaycee and Jaycee Jayne chapters.

In 1968, the Kansas Jaycee Cerebral Palsy Foundation was organized as the Jaycees began making plans to purchase a campsite. "Peanut Butter Sunday" was initiated to raise the necessary funds. One Sunday each fall, Kansas Jaycees sell peanut butter door-to-door for a donation of one dollar or more. Proceeds for the first two Sundays (a two-year period) were used to purchase the 151-acre ranch near Augusta. This purchase depleted capital reserves, and the funds from Peanut

Butter Sunday would not provide for the developmental needs of the ranch.

The Foundation then offered non-participating interests in the ranch by soliciting sponsorship of the land at \$350 an acre, or \$10 per square foot. Jaycee and Jaycee Jayne chapters across the state, as well as other organizations and private individuals, are purchasing the interests. Individual camperships at \$100 each are also being funded through these sources.

At the present time the ranch includes these facilities: a 28-acre spring-fed lake; an enclosed heated swimming pool; two 24-bed campers' cabins; and a lodge which serves as a dining hall and center for rainy day activities. A staff of volunteer counselors (professionals who work with the handicapped) and assistants (many of whom are youths interested in careers in working with the handicapped) work with the campers on a one-to-one basis. Only the camp director is salaried, receiving room, board and a small monthly stipend.

Age of the campers ranges from 5 to the mid-20's, although in 1972 a 65-year-old gentleman attended the camp, his first camping experience.

Activities at the camp include horseback riding, fishing, boating, team sports, arts and crafts, an animal farm, airplane rides, and firetruck rides, as well as the opportunity to share camping experiences with others. Campers attend for one week sessions.



## GOALS AND OBJECTIVES

In order to understand more clearly the goals program within this study, a working definition of goals, objectives, policies and programs should be given.

A goal is a statement of needs and desires expressed in general terms, indicating the direction for planning and decision making over a long-range period of time. Goals determine the course of action to be taken in the future, whether human involvement or physical change.

It should be stated here that goals and objectives are not interchangeable terms. An objective is a statement related to a specific goal statement which describes the point or end to be reached and/or the criteria under which this goal will be attained.

Goals are related to distant aspirations, while objectives are of shorter range, and more specific in describing the course of action to be taken. Objectives can be used to serve as guides to attaining goals.

Once goals and objectives have been established, policies must be outlined. Policies are statements of commitments of specific action to be taken by organizations, agencies, or governing bodies in order to implement goals. Policies are expressed as specific actions and decisions to attain goals according to the guidelines established in the objectives. In addition to providing for guidance to implementing agencies,



policies help bring about public understanding.

Programs are the next step in the process of carrying out goals and objectives. Projects are specific work programs designed to implement the goals and objectives.

With these definitions in mind, the following goals, objectives, policies and programs have been established for the cerebral palsy village.

## STATEMENT OF GOALS, OBJECTIVES, POLICIES AND PROGRAMS

### Goals

1. To continue to operate a summer camp which provides recreational activities and vacation time for cerebral palsied persons.
2. To expand usage of the camp to all cerebral palsied persons who wish to attend the camp.
3. To establish a village for cerebral palsied adults of Kansas which will present an attractive alternative to current facilities and programs.

### Objectives

1. To expand the operation of the camp to a year round program by June, 1974.
2. To increase opportunities for social interaction.
3. To provide information to cerebral palsied persons of Kansas as to the alternatives available to them in the fields of education, vocational training and occupational opportunities.
4. To provide parents an opportunity to vacation without concern for the care and welfare of their cerebral palsied children.
5. To design a village with the problems and needs of the residents in mind.
6. To provide an opportunity for the residents to become less dependent upon others.

7. To provide an opportunity for the residents to expand their scope of interests and activities.
8. To provide sources of support other than the Jaycee Cerebral Palsy Foundation.

#### Policies

1. Encourage interaction with staff, volunteers and residents of the village and camp.
2. Design the village so that it can be expanded with ease and continuity.
3. Design the village so that construction can be spread over a ten to fifteen year period without loss of effectiveness of the operation of the village.
4. Design the village according to appropriate requirements of architectural standards for construction for handicapped persons.
5. Establish programs to reduce cerebral palsied persons' dependence upon others in the following areas:
  - a. speech therapy
  - b. physical therapy
  - c. supplemental education
  - d. vocational training
  - e. personal care
6. Establish programs to expand interest and activities in the following areas:
  - a. recreation
  - b. culture
  - c. hobbies

7. Seek alternative sources of funding for development and operations.
8. Integrate training with everyday activities.
9. Discourage vehicular traffic through the village.
10. Provide a wide range of recreational activities.
11. Increase media contact to reach more cerebral palsied persons.
12. Develop programs to acquaint campers and villagers with alternatives in the areas of care, vocational training, education and occupation.
13. Provide opportunities in nature studies.

#### Programs

1. Construct community center to house eating, recreation, and entertainment facilities.
2. Construct more housing units.
3. Construct facilities for arts and crafts.
4. House campers with residents of the village.
5. Provide organized team sports.
6. Provide programs of individual recreation.
7. Provide tours of facilities for vocational training.
8. Provide educational tours of surrounding areas.
9. Provide entertainment tours.
10. Continue plane rides.
11. Provide entertainment programs at the camp and village.
12. Provide horseback riding activities.
13. Provide opportunities for worship to those of all faiths.

14. Establish a program of speech therapy.
15. Establish program for physical therapy.
16. Continue swimming program.
17. Provide a physical therapy room.
18. Hire a physical therapist.
19. Provide training in personal financial management.
20. Provide training in home economics.
21. Provide training in personal care.
22. Provide training in small business management.
23. Coordinate use of the Kansas Elks vocational training center for vocational training.
24. Coordinate use of vocational technical schools for vocational training.
25. Coordinate use of Wichita State University for vocational training.
26. Establish a program of placement for trainees upon completion of training.
27. Establish program to place trainees in private firms for on the job training.
28. Solicit funds from private or charitable foundations.
29. Work to secure state funding.
30. Work to secure federal funding.
31. Attract subcontracted work from private industry.
32. Develop agricultural production of the land.
33. Develop small businesses such as raising pets, nursery operations, etc.

34. Develop fund raising projects for the village.

35. Establish a program of horticulture therapy.

36. Encourage village residents to help campers.

Once these goals, objectives, policies and programs have been determined, an orderly means of their implementation must be developed.

## CAPITAL IMPROVEMENT PROGRAM

Capital improvement programming can be described as the orderly scheduling of expenditures for capital improvements based upon the priorities established by the goals and objectives and current and anticipated financial conditions.

The capital improvements program can lead to a more orderly progression toward the goals and objectives as specified since it does provide a timetable for implementing programs leading to realization of goals.

This program has been established on an eleven year period. At the end of each year the program should be re-evaluated and adjustments made where necessary.

Each year a capital budget should be prepared for implementing that year's portion of the capital improvements program.

There are three basic financing methods available for capital improvements programming. These are: pay as you go, borrowing, and lease to purchase.

### Pay As You Go

Capital improvements can be financed with current revenues. This eliminates the problem of borrowing money and paying substantial amounts of interest on that money. A second major advantage is that it does not obligate funds



from future years. One major drawback to this method is that quite often there is not sufficient current revenue to fund major projects.

Items which cost too much to finance in one year of current revenues may be financed through the use of reserve funds by setting aside money each year toward the financing of capital improvements. The advantages of this method are primarily the same as those for current revenue financing. The major limitation is that large projects which are immediately necessary may have to be postponed until a sufficient reserve exists.

A third method of pay as you go financing is through special fund raising. Items which are immediately necessary may be financed by conducting a special fund raising campaign to finance major expenditures. Once again there is the advantage of not having to postpone needed improvements, thereby minimizing effects of rising costs.

### Borrowing

Financing by borrowing provides an opportunity to make capital improvements which, because of cost, would be impossible or impractical to finance on a pay as you go basis. Financing by borrowing is generally thought of on a long term basis; but it may also be used on an interim basis in a primarily pay as you go system to capitalize on a favorable opportunity during periods of critical cash flow.

The disadvantages of financing by borrowing are: future revenues are obligated, thus reducing the amount of capital available for improvements in the future, increased costs due to payment of substantial interest, and reduction in the borrowing power available for emergencies.

#### Lease to Purchase

Lease to purchase plans can also provide sources of financing for capital improvements. This is a method whereby a private developer would build the project and lease it to the organization. At the end of a specified period of time, ownership would revert to the organization. Large initial capital outlays may be avoided and lease payments made from current revenues or through borrowing if necessary. This method may be nearly as binding as borrowing but borrowing power is not reduced.

Each method of financing has its advantages and disadvantages, but the pay as you go method has the best possibility for minimizing the disadvantages, especially through use of special fund raising projects and, if necessary, interim borrowing. This is especially true since relatively high levels of subsidy may be available.

Priorities in this capital improvement program have been ranked on a scale of from one to six with one being high and six being low. Priorities were established on a basis of the following criteria:

Goals and objectives  
Protection of life  
Maintenance of public health  
Availability of funds  
Operational efficiency  
Size of group benefited  
Convenience and comfort of residents and staff  
Recreational needs  
Therapy needs  
Vocational training needs  
Social needs  
Public relations value  
Availability of subsidies  
Level of services  
Demand for facilities  
Interdependence of projects  
Cost of construction

While each of these criteria will not be applicable in all cases, it does provide a means of evaluating importance of various projects as well as providing a checklist to insure that important points of consideration are not excluded.

The projects list (table 5) contains the project number of each project as well as a description of the project; the 1973 estimated cost of the project; comments about the project; possible income to be derived from the project; related

projects which are interdependent; the objective to which the project is related and a priority for the project.

The project list was developed by transforming goals and objectives to requirements for physical facilities. These physical requirements were based, in part, upon a site plan prepared by Kenneth von Achen. The cost of these facilities, a few of which have already been constructed, were in part estimated by Mr. von Achen, architect. Additional cost estimates were obtained through the use of various construction estimators as well as interviews with contractors. Cost estimates of agricultural production were based upon Kansas State University extension publications supplemented with information obtained from personal interviews with experts in each field.

The capital improvements program project summary table (see appendix A) contains a listing of all projects by project number with information on project priority; estimated cost in 1973; year of implementation; and cost of project in that year based upon 10% per year inflation of construction costs. It also contains information about annual operating costs when applicable.

## FINANCES

"Few, if any, of the nation's rehabilitation centers are self-supporting, and most are heavily dependent upon subsidy."<sup>2</sup> According to Mott's study, 18% of the total income came from subsidies.<sup>3</sup> This does not present a truly accurate picture, however, since of the 77% of income derived from fees, 85% came from third party sources, which includes governmental bodies.<sup>4</sup>

Assistance for financing construction and operation of facilities is available from federal, state and private sources and all sources should be developed to the utmost.

Federal assistance for construction is available under the provisions of the Public Health Service Act Title Six, more commonly known as the Hill-Burton program. Assistance under this act is available to state and local governments and to private non-profit organizations for the construction of new facilities, the remodeling or expansion of existing facilities and equipment necessary for the provision of a new service for the community. This assistance is in the form of matching grants, with the federal government paying up to 2/3 of the cost. In 1972 nearly 195 million dollars in Hill-Burton funds were expended. Financial aid is expected to continue under this program during the current administration.

<sup>2</sup>Basil J. F. Mott, Financing and Operating Rehabilitation Centers and Facilities (Chicago, 1960), p. 17.

<sup>3</sup>Ibid, p. 20.

<sup>4</sup>Ibid, p. 21.

Construction grants are normally available under the Vocational Rehabilitation Construction Grant Program, Section 12, of the Vocational Rehabilitation Act. Uses under this act are similar to those under the Hill-Burton act, with the added provision of money for initial equipment and purchase of land. While this act is still on the books, no funding has occurred for three years and none is expected in the near future.

A limited amount of federal money is available under the basic support program of the vocational rehabilitation act. This money is distributed to the Division of Vocational Rehabilitation, Kansas Department of Social Welfare. Kansas' share this year was \$4,300,000. Of this, ten percent may be earmarked for construction of facilities. The remainder is needed for equipment, remodeling and staffing of facilities. Application should be made through the Kansas Division of Vocational Rehabilitation, Kansas Department of Social Welfare, Frank Hage, Director.

Funding under the Developmental Disabilities Services and Facilities Construction Amendments of 1970 is also available to non-profit organizations. Grants are available for construction, cost of operation, staffing, and maintenance of facilities. Application under this act should be made to Dennis Popp, consultant for mental retardation services, Division of Institutional Management, State Department of Social Welfare.



Money has been available under the Vocational Rehabilitation Act, Section 4a, Developmental Disabilities - Special Projects. Uses under this act are for personnel, equipment, supplies and training salaries. It is designed primarily for innovative projects. No money has been available recently nor is any expected in the near future.

The Vocational Rehabilitation Act of 1965 as amended, Sections 4a, 12 and 13, provide for rehabilitation service projects. Uses under this act are for expansion grants, construction grants, facility improvement, professional staff and planning. No money is currently available under this section and none is anticipated in the near future.

Federal money is available under the Social Security Act, Title 19, for subsistence and maintenance of the disabled and under Title 16 for purchase of service to pay tuition for vocational rehabilitation.

These provisions are all administered by the state, and state funding is available in coordination with federal funding. State funds might also be made available by direct appropriation.

Private sources of funding must not be overlooked. Such sources as United Cerebral Palsy and major philanthropic organizations could provide substantial sources of funding.



A critical part in the determination of the feasibility of this project must be the determination of the operating cost for the facility when it is in full operation (see table 1). In order to determine the cost, the structure of ten rehabilitation centers in the United States was examined. From these ten (see appendix B), one, Woodrow Wilson Rehabilitation Center in Fishersville, Virginia, was selected as a model. Woodrow Wilson was chosen because its size and function most nearly resembled that of the proposed village for cerebral palsy victims.

Woodrow Wilson's expenses and income were analyzed and each function was broken down into a percentage of the total. Staff figures were broken down and a staff to patient ratio was established (see table 2). It was this ratio that was used to determine the staff necessary for the village. A similar procedure was used to determine the total operating costs and cost for each function.

Income is more difficult to project. Income from possible agricultural production was the easiest to predict with accuracy. Summaries of income and cost for these crops appear in appendix C. It was necessary to estimate expected returns in ten years from the Kansas High School All Star football and basketball games since they have not been held previously. Similarly, the period of time over which Peanut Butter Sunday has been held was too short for accurate projections and it was necessary to estimate anticipated returns.

Table 1

## Projection of Expenses for Village 1983

	# of Employees	Estimated Cost
Total	106	\$1,165,654
Service Departments		
Medicine	53.8	448,826
Nursing	2.9	48,701
Dormitory	13.0	84,645
Physical therapy	3.66	19,175
Occupational therapy	6.6	45,306
Speech	2.3	13,461
Admissions	.68	5,500
Recreation	.68	4,888
Psychology	1.37	9,127
Vocational evaluation	2.0	20,630
Vocational counseling	0	5,547
Vocational training	3.4	19,736
	16.0	164,798
Auxiliary Departments		
Dietary	22.2	429,027
Canteen	17.6	229,305
Transportation	3.4	76,567
Patient welfare	.91	12,215
Purchase of prosthetic devices	0	79,287
	0	31,648
Overhead Departments		
Administrative and general	30	287,798
Household and property	8.9	67,418
	21.1	200,380

# Number of Paid Staff Members in Full-time Equivalents at the Time of the Study Period

Department	Woodrow Wilson Number of Staff	Dept. as % of Total	Staff/ Patient	C. P. Village Number of Staff
Total Number of Staff	148.8	100	.463	106
Service Departments				
Medicine	75.4	50.7	.235	53.8
Nursing	4.3	2.9	.013	2.9
Dormitory	18.4	12.3	.057	13.0
Physical therapy	5.2	3.5	.016	3.66
Occupational therapy	9.6	6.4	.029	6.6
Preschool occupational therapy	3.3	2.2	.010	2.3
Home service occupational therapy	--	--	--	--
Speech	--	--	--	--
Admissions	1.0	.6	.003	.68
Social service	1.0	.6	.003	.68
Group work	--	--	--	--
Recreation	--	--	--	--
Psychology	2.2	1.5	.006	1.37
Vocational evaluation	3.0	2.0	.009	2.0
Vocational counseling	--	--	--	--
Vocational training	4.8	3.2	.015	3.4
Workshop	22.6	15.2	.070	16.0
	--	--	--	--
Auxiliary Departments				
Dietary	31.3	21.0	.097	22.2
Prosthetic and orthotic shop	25.0	16.8	.077	17.6
Purchase of prosthetic devices	--	--	--	--
Patient welfare	--	--	--	--
Canteen	5.0	3.4	.015	3.4
Transportation of patients	1.3	.8	.004	.91
Fund raising	--	--	--	--
Research projects	--	--	--	--
Training projects	--	--	--	--
Other	--	--	--	--
Overhead Departments				
Administrative and general	42.1	28.3	.131	30.
Household and property	12.5	8.4	.039	8.9
	29.6	19.9	.092	21.06

Table 3

Projection of Income for Village 1983

Peanut Butter Sunday	\$100,000
All Star Games	100,000
Agricultural Production	103,000
Income from Fees	862,654
Campers	50,000
Village	\$12,654

Generating income is a critical factor in the development of this type of facility. Industry is the most common source of internally generated income. Industry can provide a means of vocational training as well as generating income. Industrial start-up costs, however, can be very high. Market changes and technological changes also can be the source of problems.

There are numerous alternatives to industry as a source of income which also can provide valuable vocational training opportunities. One very good possibility is small industry or small businesses. These could be types which require only a few people and could be developed as a vocation by clients upon completion of training at the village.

Another source of income could be service industries. There are a number of service industries which could provide income, vocational training and a possible vocation for clients upon completion of training. Some examples would be advertising, accounting, appliance repair, computer programming and many more. There should be a sufficient mix of businesses to provide opportunities for clients with various handicaps.

Another possibility is agricultural production which includes such businesses as nursery operation, raising pets, catfish farming, and similar businesses as well as more traditional agriculture. These sources of income should

certainly not be overlooked as they can be substantial, especially on large sites. As an example, estimates of potential income from growing strawberries, apples, peaches and Christmas trees were developed for this site (see appendix C). These four crops alone could provide over \$100,000 per year and there would be substantial amounts of vacant land remaining.

One overriding thought should be that projects, in addition to generating income, should also provide vocational training, possible vocations or hobbies, and physical or mental therapy whenever possible.

## NON-MONETARY CONSIDERATIONS

In addition to questions of monetary feasibility, there are a number of other considerations which have a bearing on feasibility. Included in these are considerations of feasibility in engineering, architecture, psychology, law, and politics.

### Engineering Considerations

There are a number of questions about feasibility from an engineering standpoint which must be answered. The first question is whether or not the soil is suitable for building. Secondly, there are questions about the adequacy of utilities such as water supplies, energy supplies, sewage treatment facilities, and access roads. There is also the question of whether or not there is adequate drainage and if there will be problems due to excessive grades, thus requiring extensive cut and fill operations. These questions need to be answered before a facility is developed.

### Architectural Considerations

There are also a number of special architectural problems encountered in the development of this type of facility. All facilities must be designed with the handicapped in mind. Access to facilities cannot be impaired for people in wheelchairs. Larger spaces are required for maneuvering in wheelchairs. In addition to these specific design requirements,



which can be obtained from the American Standards Association, there are other more general concepts which must be examined. Travel distances for residents should be minimized due to mobility problems experienced by many cerebral palsied people. This is perhaps one of the larger problems in designing a village for cerebral palsied people. Additionally, there is the problem of safety for the residents in case of fire and severe storms. Successful solutions to these problems must be developed.

#### Psychological Considerations

There can be a number of psychological reactions experienced by clients entering the village. There will be both positive and negative reactions. There will be the normal reactions of moving away from home and into a new environment. These reactions are, however, normal and not necessarily related to the village.

Perhaps the largest negative psychological reaction would be that which would occur as a result of being isolated to a certain extent from the outside world. This problem could be overcome at least in part by providing contact with the outside world. This could be accomplished through trips and tours, but primarily through contacts developed in retail sales outlets for village products and through contacts during on the job training in the surrounding communities. Additionally, a homeward bound program could be established

to aid residents in their adaptation to the outside world at the completion of their training. Such a program might start at the village and then progress to a halfway house for the completion of the adaptation.

The greatest positive psychological reaction to the village will be the sense of hope and usefulness that will be given to the cerebral palsied. Cerebral palsied people will be able to see that they can, with training, lead productive lives and be less dependent upon others. This aspect could be especially important to younger people attending the camping program and seeing the kinds of work being accomplished by the residents in training.

When speaking of camping and rehabilitation centers, Jean Strickler, president of the Kansas Federation of Handicapped Children, said:

The emphasis must be on making their lives as normal as possible. Ask not what they can do, but how we can adapt what everyone else does so that the handicapped can do it too. If a handicapped child wants to play basketball, they must adapt the game of basketball to meet his abilities--goals that are adjustable, balls that are lighter, etc. These persons must be allowed to reach out, touch and explore every aspect of life as much as possible. They must be encouraged to feel themselves a part of society rather than separate and apart from it.

Don't be too cautious. They must be allowed to take chances--to scrape a knee or be stung by a bee--for this is an important part of growing up. Overprotection and shielding from the problems of life can be as dehumanizing as rejection.

## Legal Considerations

There are several legal problems which might be encountered in the development of a facility of this type. One such problem is paying less than minimum wage to residents for work performed. This, however, is not an insurmountable problem. Another possible source of legal problems will be conforming to existing zoning regulations and seeking zoning changes which will permit the varied land uses anticipated. Other legal problems might occur in meeting specific criteria required for state and federal funding. Additional problems might be encountered, but none should prove to be insurmountable if considered by competent legal advisors.

## Political Considerations

One of the largest problems encountered by this type of facility will be public acceptance from both private citizens and governmental bodies. There is often a negative reaction from the public toward plans for facilities for atypical people. This is liable to be the case with this facility. One way of preventing or minimizing this effect is to make the facilities attractive and to have them heavily screened so they are less pronounced. The most important method of overcoming this reaction is with a sound, positive public relations program to acquaint the public with the need for the facilities and, when possible, to show them the work that has been or can be accomplished. A sound and effective low

key public relations program can be of immense value in eliminating and preventing political problems. This is essential in that political problems often ultimately result in legal problems which hinder, stop or prevent development of the site.

## CONCEPTUAL PLAN

There are a number of concepts which must be considered when planning camping and vocational rehabilitation facilities for cerebral palsied people. Important among these considerations are location, size, and nature of services to be offered and what facilities are necessary.

There are many things to be considered in selecting a site location. Should the facility be an urban or rural facility? Where should it be located with respect to population centers, schools, medical facilities, retail outlets, employment centers, other rehabilitation centers and many other considerations? There cannot be any "ideal location" which will be universally applicable. Each facility has its own requirements for location which are dependent upon adequacy and location of existing facilities, types of programs to be offered, availability of land, political considerations, employment opportunities, financial considerations and many other considerations.

There are, however, some concepts which are generally applicable. Generally, facilities should be located in or near major population centers. Outpatient centers generally need to be located in major population centers and near major transportation networks to minimize transportation costs. Inpatient centers generally need not be located as close in as outpatient centers since there is much less need for travel

to widely spread areas. They should not be located so far out, however, that transportation costs for daily work and recreation trips to the major population centers are excessive.

Rural or suburban fringe settings are often preferable in that land is generally less expensive, thus permitting more spacious and extensive development.

If medical or educational facilities will not be available on the site, it will be necessary to be within easy access of existing medical or educational facilities.

Location should be such that there would be easy access to nearby training centers if not all training is to be provided on the site. The site should also be near employment centers to make it possible to utilize more fully on the job training as a vocational rehabilitation tool.

It will often be necessary to be near major population centers to be able to insure maintenance of an adequately trained staff. If products made at the facility are to be sold, it would be advantageous to be located near major population centers so that retail outlets could be easily maintained.

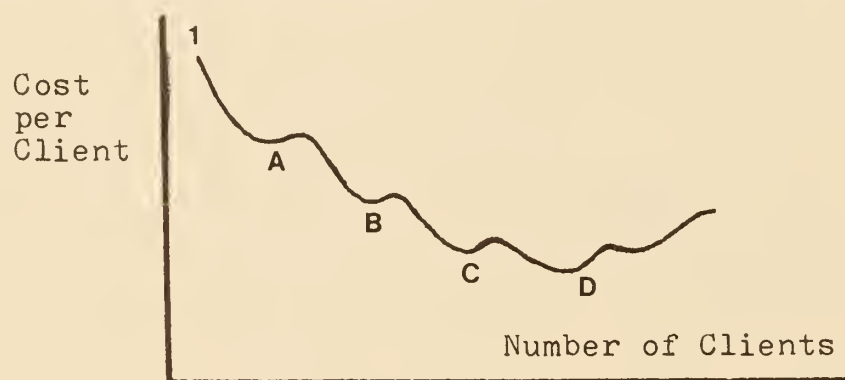
Location with respect to other similar facilities should be such that adequate coverage of the area can be attained without unnecessary overlapping of service areas.

The optimum size of facilities will vary considerably depending upon such factors as location and the types of



services to be offered. While an urban outpatient vocational training facility offering only one or a few types of vocational training might operate quite efficiently with only a few clients, an inpatient facility providing the same services must have a larger number of clients to operate effectively.

There are economies of scale which occur up to a specific point. Generally, as overhead costs are spread over more clients, a lower cost per client can be achieved. Cost per person will decrease at a decreasing rate until the number of clients reaches a certain level at which time cost per person will level off or increase slightly. There are many levels of economies of scale, so that rather than being a continuous curve, cost per person could be expected to behave in a manner as illustrated below.



There can be several optimum numbers of clients, dependent upon the extent of improvements or services offered. In the above illustration, point one would coincide with the opening of the facility. As the enrollment increased, overhead cost per person, and thus total cost per person, would decrease until



point A is reached and capacity of the classroom is exceeded. At this point a new classroom is needed and overhead costs and total cost per person would rise until more clients are enrolled and costs once again decrease. After each improvement, costs decrease at a decreasing rate until finally at some point, illustrated as point D, costs can no longer be made to decrease as enrollment increases and improvements can only serve to slow down rising unit costs.

In the case of the village proposed in this study, economies of scale can be expected to be achieved initially in the areas of administration, land cost, building costs, nursing care, food service and other overhead factors. As the village is developed, these economies will be less pronounced and diseconomies of scale will become more evident. Among the more pronounced diseconomies will be transportation and construction costs. On this site economies of scale will be very pronounced up to an occupancy of approximately 150 and thereafter less pronounced until reaching a practical maximum of about 300 clients. The ultimate practical occupancy would be in the vicinity of 600 residents.

The nature of services to be offered should be determined from the goals and objectives for the facility. A basic question which needs to be answered is: Should the facility be an inpatient, outpatient or mixed facility? This will depend in large part upon the demand for services and the

location of the proposed facility. An inpatient center was deemed appropriate in this case since the site is so far from many of its potential clients. There will be many other cases in which an outpatient or mixed facility will be more appropriate.

The services to be offered in this facility fall into five categories: nursing, personal care, physical therapy, vocational training, and recreational activities.

#### Nursing:

While nursing services are not an end in themselves, nursing staff must be available as a supportive element in the other services offered. The nursing staff will of necessity play a larger role with new clients. They can be of great assistance in helping new clients to become more independent. A nursing staff can also play a vital role in dealing with emergency medical problems.

#### Personal Care:

One of the objectives of the village is to provide an opportunity for the residents to become less dependent upon others. A vital step in accomplishing this objective is to teach residents to care for more of their own personal needs. To meet this end, instruction should be provided in the areas of personal hygiene, home economics and personal financial management.

### Physical Therapy:

Physical therapy is an integral part of an overall rehabilitation process. A great deal of physical therapy could be integrated with other programs such as vocational training, personal care and recreation activities. A specific program of physical therapy could be developed to augment this incidental therapy where needed.

### Vocational Training:

Vocational training should receive major emphasis at this center. Vocational training could be conducted either in house, or externally, utilizing existing facilities, or through placement in on the job training positions.

The training programs conducted in house will depend upon what training programs are available outside. Some possible courses of training are small appliance repair, handicrafts, bookkeeping, small business operation and many more. It is possible that part of the training could occur as on the job training in activities carried on at the village.

External vocational training could utilize facilities such as the Kansas Elks Training Center, area vocational technical schools and Wichita State University. Special transportation could be provided on a regular basis for residents of the village to attend these training programs.

On the job training in the surrounding communities could provide a valuable source of vocational training for residents

of the village. Special transportation could be provided initially with provision for a transition to living outside the village in the community where the client is working.

#### Recreational Activities:

Recreation services play an important part in the overall program of the village. Recreational activities should be provided for the long term residents of the village as well as the campers. Recreational activities should be available on a year round basis. Included in these recreational activities would be swimming, fishing, bowling, horseback riding, softball and other team sports. Recreation could be provided in arts and crafts work, drama presentations and singing. Game rooms would also be available in the dining hall and recreation center. Additional recreation could be provided by taking tours of museums and recreational sites as well as attending movies, concerts, and sporting events.

There are many other services which could be offered in such a program. Other services which should be considered are medical services, education, counseling, transportation services and speech training.

In order to provide the required services, physical facilities are necessary. These facilities can be classified as residential, vocational training facilities, recreational facilities and miscellaneous buildings.

Residential units would consist of ten and twenty-four person dormitories as designed by Kenneth von Achen, architectural consultant to the Kansas Jaycees Cerebral Palsy Foundation.

Vocational training facilities would include buildings necessary to house classrooms as well as a nursery, pet operations and office space.

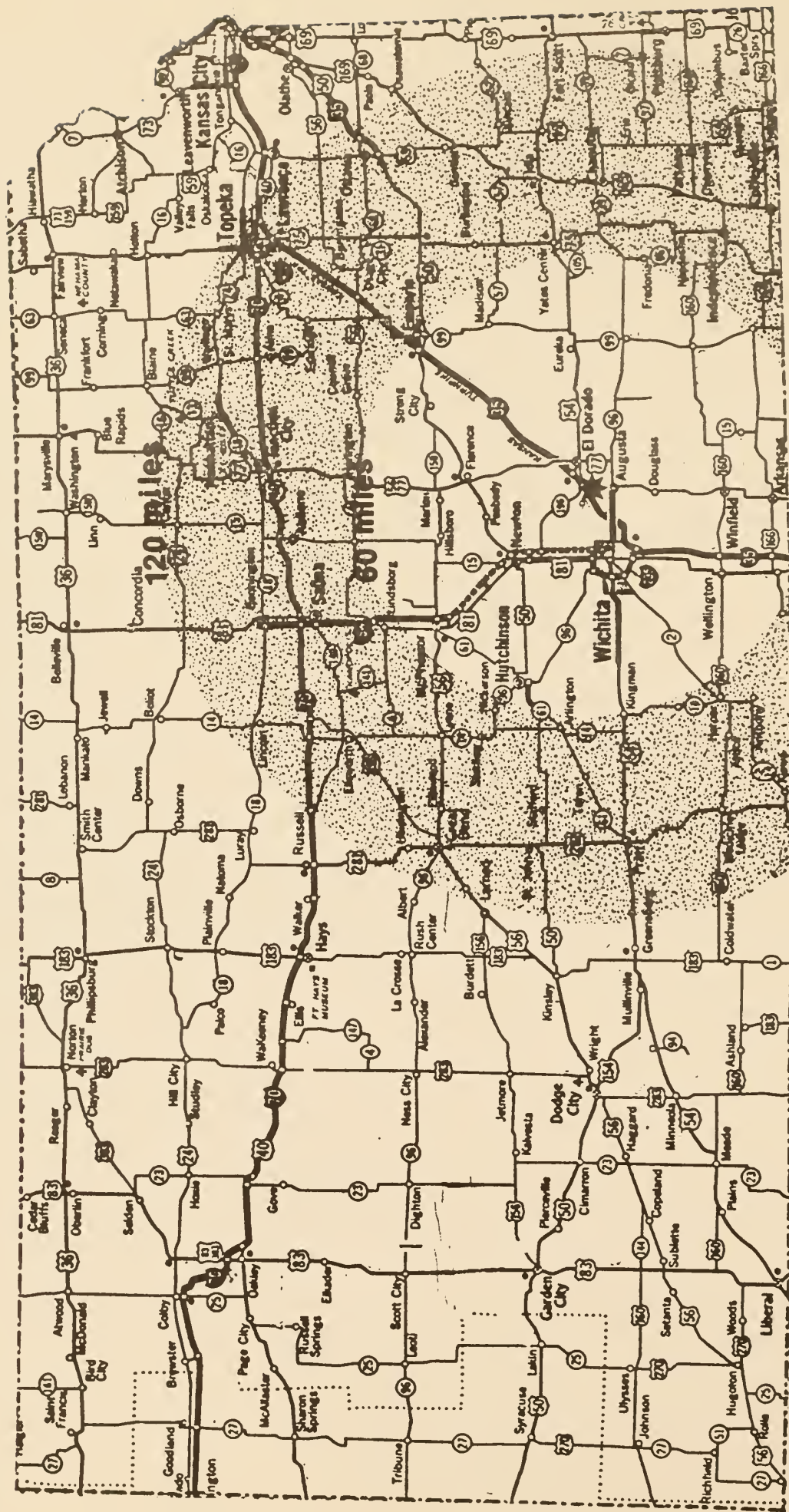
Recreational facilities would include the dining hall and recreation center, riding arena and stables, arts and crafts buildings. Outdoor recreation facilities would include a swimming pool, boat dock, heated fishing dock, play grounds, ball diamonds and an outdoor amphitheater.

Miscellaneous buildings would include the director's residence and maintenance buildings.

Placement of these buildings on the site is a problem from the standpoint of providing enough living units and at the same time minimizing travel distance between the buildings. It is also necessary to maintain a minimum spacing of 60 feet in order to meet fire insurance requirements. In order to accomplish these ends, a clustered development might be appropriate. Residential units could be clustered in one or more clusters surrounding the central recreational and training facilities. An example of how this might be accomplished is shown in Illustration One. Vehicular traffic through the area should be minimized. This might be accomplished by eliminating roads through the residential area



# DISTANCE TO SITE



and providing emergency access on the wider than normal sidewalks required by wheelchairs. As much as possible, projects should provide multiple functions. Examples of this concept would be the use of productive trees and nursery stock for landscaping as well as producing income. In order for the village to be developed effectively, it needs to be planned in a comprehensive manner with adequate consideration given to the integration of various uses.



## SUMMARY AND RECOMMENDATIONS

### Summary

The position of this proposed facility will probably be very similar to that of most facilities. "Few, if any, of the nation's rehabilitation centers are self-supporting, and most are heavily dependent upon subsidy. Ordinarily, centers do not obtain enough income from charges for their services and must annually seek subsidy through contributions and grants to recover the total cost of operations."<sup>5</sup>

There are, however, two primary reasons for believing that this facility would be feasible. First of all, this facility has the possibility of generating more self-support income from sources other than fees than did the other facilities studied. Secondly, the funds which must be raised by charges for fees including third party sponsorship would result in a daily fee which would be well within the acceptable range for federal and state funding. Substantial subsidies will, however, be necessary to insure successful operation.

A major role in the development of facilities such as these must be in planning for and developing sources of third party funding. Prime sources of third party funding are state vocational rehabilitation agencies, federal grants, voluntary health agencies, philanthropic organizations and private donations.

<sup>5</sup>Mott, Financing and Operating Rehabilitation Centers and Facilities, p. 17.

The importance of developing an effective and continuing program for soliciting third party funding cannot be overstated.

There are some ways in which vocational training can be used to cut costs as well and thus enhance the feasibility of the project. Many of the positions on the staff, perhaps well over 50%, could be filled by residents of the village in on the job training situations as trainees and possibly later as instructors. This would provide a source of readily available on the job training positions.

Fees should be established which will reflect the full cost of services provided. In the case of the C. P. Village, the actual cost of services in 1983 would amount to \$13.95 per person per day. The full fee should be charged. It is obvious that few of the residents would be able to afford the full fee and the balance would have to be provided through third party sponsorships. The need for clearly establishing a fee which reflects all costs is precipitated by the fact that third party sponsors are unlikely to provide more than the published fee. The higher the percentage of total cost provided through fees, the greater is the amount of income from other sources available for capital improvements.

It would also be possible to increase the amount of money raised by agricultural production by more intensive utilization of the land or by adopting more specialized or profitable crops.

There is also a possibility of income from training in small business operations and possible light industry. Money derived from these sources could be used to pay wages to the trainees or reduce the cost of operation or both.

The determining factor in the success or failure of this facility, however, will be third party sponsorship and other outside funding. It is imperative that a plan for the development of outside funding be developed and energetically followed.

#### Recommendations

While this facility is necessary and can care for several hundred cerebral palsied people each year, it is only the starting point. This facility cannot hope to accommodate the 4500 people who are in need of help. There is a need for additional units of similar function throughout Kansas.

As can be seen in Illustration 2, the primary service area, within a radius of sixty miles, covers only a small percentage of the state and the secondary service area, shown in grey, within a radius of 120 miles, leaves a major portion of the population without adequate service. Additional units need to be developed to include the major population centers of Kansas City and Topeka in a primary service area. Additionally there should be center to service the needs of north central Kansas. Centers should also be located to serve western Kansas and extreme southeastern Kansas. Some possible



# SITE PLAN

CEREBRAL PALSY  
VILLAGE  
AUGUSTA, KS.

KANSAS JAYCEES  
CEREBRAL PALSY  
FOUNDATION

BERNARD J. MCGUIRE, DIRECTOR

raymond w. johnson

1" = 400'

## LEGEND

- ELEVATION
- FENCE
- SIDEWALK
- 2200' RUNWAY
- SEWAGE TREATMENT
- ARTS & CRAFTS
- NURSERY
- MAINTENANCE
- DINING HALL & RECREATION
- SWIMMING POOL
- 20 MAN DORM
- 10 MAN DORM
- RIDING ARENA
- MAINTENANCE
- HEATED FISHING DOCK
- BOAT DOCK
- DIRECTOR'S RESIDENCE
- APPLE and PEACH TREES
- PECAN TREES
- PINE TREES
- MISCELLANEOUS TREES
- PLAYGROUND
- CATFISH FARM
- TRUCK GARDEN



locations would be Parsons, Kansas City, Topeka, Manhattan, Salina, Hays and Garden City.

In addition to developing additional centers, there is a need for development of additional services and programs.

In addition to the needs for camping and vocational training, there is a definite need for more in depth programs of medical treatment. There will also be an increasing need for sheltered workshops and residential programs for those who are unable to achieve successful employment in the private sector. Programs should also be expanded in metropolitan areas to provide outpatient training and vocational guidance and placement.

While this study has been concerned with Kansas in general and the Augusta site in particular, these concepts and needs apply to the midwest and the nation. The proposed site at Augusta will be capable of serving only four one-hundredths of one percent of the cerebral palsied in the nation and only 1.2% of the new cerebral palsied born each year. While this facility is a step in the right direction, it is only a very small step when the needs of the nation are considered. There remains a great deal to be accomplished.

A P P E N D I X    A

# Projects List

Project - Number	Description	Cost in 1973	Comments	Income	Related Projects	Related Objectives	Priority
F 1	Community Center	450,000	Dining hall, recreation center, chapel, library	None	U 8	Expand operations	2
F 2	Arts and Crafts Shop #1	16,000		None		Increase interest and recreation	3
F 3	Arts and Crafts Shop #2	16,000		None		Increase interest and recreation	6
F 4	Greenhouses (2500 Sq.')	12,000		\$12,000/yr.		Increase interest and recreation	3
F 5	Remodel lodge	2,000		None		Improve facilities	3
F 6	Riding arena and stock barns	50,000	indoor and out- door riding arena and stock barns	None		Increase interest and recreation	3
F 7	Amphitheatre	15,000		None		Increase interest and entertainment	3
F 8	Boat dock	5,000		None		Increase interest and recreation	2
F 9	Fishing dock (heated)	5,000		None		Increase interest and recreation	2
F 10	Maintenance building	5,000		None		Expand facilities	3



# Projects List

Project Number	Description	Cost in 1973	Comments	Income	Related Projects	Related Objectives	Priority
I 1	Pecan grove	650	see table 1			Financial independence	3
I 2	Apple orchard	2,190	see table 2			Financial independence	3
I 3	Peach orchard	1,665	see table 3			Financial independence	3
I 4	Christmas tree farm	860	see table 4			Financial independence	3
I 5	Nursery	6,000	for stock and initial supplies			Financial independence vocational training	3
I 6	Truck garden	1,000				Financial independence	3
I 7	Pet operation	2,000				Financial independence vocational training	3

# PROJECTS LIST

Project Number	Description	Cost in 1973	Comments	Income	Related Projects	Related Objectives	Priority
R 1	24 man dorm	60,000	single story	none	U 1	expand operations	4
R 2	24 man dorm	60,000	single story	none	U 1	expand operations	4
R 3	24 man dorm	60,000	single story	none	U 2	expand operations	5
R 4	24 man dorm	60,000	single story	none	U 2	expand operations	5
R 5	24 man dorm	60,000	single story	none	U 2	expand operations	5
R 6	24 man dorm	60,000	single story	none	U 3	expand operations	6
R 7	10 man dorm	27,000	single story	none	U 1	expand operations	4
R 8	10 man dorm	27,000	single story	none	U 1	expand operations	4
R 9	10 man dorm	27,000	single story	none	U 1	expand operations	4
R 10	10 man dorm	27,000	single story	none	U 1	expand operations	4
R 11	10 man dorm	27,000	single story	none	U 2	expand operations	5
R 12	10 man dorm	27,000	single story	none	U 2	expand operations	5
R 13	10 man dorm	27,000	single story	none	U 2	expand operations	5
R 14	10 man dorm	27,000	single story	none	U 2	expand operations	5
R 15	10 man dorm	27,000	single story	none	U 3	expand operations	6
R 16	10 man dorm	27,000	single story	none	U 3	expand operations	6
R 17	10 man dorm	27,000	single story	none	U 3	expand operations	6
R 18	10 man dorm	27,000	single story	none	U 3	expand operations	6
R 19	Director's residence	24,000	single story with space for crisis center	none		expand operations	2

Projects List							
Project Number	Description	Cost in 1973	Comments	Income	Related Projects	Related Objectives	Priority
S 1	Softball field	1,000				Increase recreation	2
S 2	Softball field	1,000				Increase recreation	4
S 3	Hard surface play area (125x125)	4,690	Basketball and miscellaneous sports			Increase recreation	2

# PROJECTS LIST

Project Number	Description	Cost in 1973	Comments	Income	Related Projects	Related Objectives	Priority
U 1	Sewage lines 6" first 1/3 (600')	2,100	Plastic pipe	None	U 14	Expand operation	4
U 2	Sewage lines 6" second 1/3 (600')	2,100	Plastic pipe	None	U 15	Expand operation	5
U 3	Sewage lines 6" third 1/3 (600')	2,100	Plastic pipe	None	U 16	Expand operation	6
U 4	Water lines 4" first 1/3 (600')	800	Plastic pipe	None	U 14	Expand operation	4
U 5	Water lines 4" second 1/3 (600')	800	Plastic pipe	None	U 15	Expand operation	5
U 6	Water lines 4" third 1/3 (600')	800	Plastic pipe	None	U 16	Expand operation	6
U 7	Hard surface existing road	54,000	No curbs, concrete	None	None	Improve facilities	2
U 8	Construct new road to community center	24,000	No curbs, Concrete	None	None	Improve facilities	2
U 9	Parking lot, 32 cars 120'x120'	5,000	Concrete with perimeter sidewalk	None	U 8	Improve facilities	2
U 10	Sidewalk: nature trail, along lake (2600')	8,320	8' wide concrete	None	None	Expand interests and activities	2
U 11	Sidewalk: west residential from spillway to northernmost existing dorm	4,160	8' wide concrete	None	None	Expand interests and activities	2
U 12	Sidewalk: connect residential to lake	6,400	8' wide concrete	None	None	Expand interests and activities	2

# PROJECTS LIST

Project Number	Description	Cost in 1973	Comments	Income	Related Projects	Related Objectives	Priority
U 13	Sidewalk: riding area to arts and crafts (1200')	3,840	8' wide concrete	None	None	Expand interests and activities	3
U 14	Sidewalk: new residential A (600')	1,920	8' wide concrete	None	R1,R2 R7,R8 R9,R10	Expand operations	4
U 15	Sidewalk: new residential B (700')	2,240	8' wide concrete	None	R3,R4 R5,R11 R12,R13 R14	Expand operations	5
U 16	Sidewalk: new residential C (600')	1,920	8' wide concrete	None	R6,R15 R16,R17 R18	Expand operations	6
U 17	Trackless train	5,000		None		Facilitate mobility	3
U 18	Bus	6,000		None		Vocational training	3

# Capital Improvement Program Project Summary Form

Project Number	Priority	Total Est. cost 1973	1973	1974	1975	1976	1977	1978	1979	1980	1981	after 1981
U 1	4	2,100				2,430						
U 2	5	2,100						2,550				
U 3	6	2,100								2,954		
U 4	4	800				930						
U 5	5	800					972					
U 6	6	800								1,125		
U 7	2	54,000			59,500							
U 8	2	24,000		25,200								
U 9	2	5,000			5,512							
U 10	2	8,320			9,170							
U 11	2	4,160		4,368								
U 12	2	6,400			7,056							
U 13	3	3,840			4,233							
U 14	4	1,920				2,222						
U 15	5	2,240						2,722				
U 16	6	1,920								2,701		
U 17	3	5,000			5,512							
U 18	3	6,000			6,615							

# Captial Improvement Program Project Summary Form

Project Number	Priority	Total Est. Cost 1973	1973	1974	1975	1976	1977	1978	1979	1980	1981	After 1981
U 15	5	2,240						2,722				
U 16	6	1,920								2,701		
U 17	3	5,000			5,512							
U 18	3	6,000			6,615							
R 1	4	60,000				69,450						
R 2	4	60,000				69,450						
R 3	5	60,000						72,930				
R 4	5	60,000						72,930				
R 5	5	60,000						72,930				
R 6	6	60,000								84,425		
R 7	4	27,000					32,800					
R 8	4	27,000					32,800					
R 9	4	27,000					32,800					
R 10	4	27,000					32,800					
R 11	5	27,000							36,180			
R 12	5	27,000							36,180			
R 13	5	27,000							36,180			
R 14	5	27,000							36,180			
R 15	6	27,000								39,890		



Project Number	Priority	Total Est. Cost 1973	1973	1974	1975	1976	1977	1978	1979	1980	1981	After 1981
R 16	6	27,000									39,890	
R 17	6	27,000									39,890	
R 18	6	27,000									39,890	
R 19	2	24,000		25,200								
F 1	2	450,000		472,500								
F 2	3	16,000			17,600							
F 3	6	16,000							21,440			
F 4	3	12,000			13,200							
F 5	3	2,000			2,200							
F 6	3	50,000			55,125							
F 7	3	15,000			16,500							
F 8	2	5,000			5,512							
F 9	2	5,000			5,512							
F 10	3	5,000			5,512							
S 1	2	1,000			1,100							

Capital Improvement Program Project Summary Form

<u>Project Number</u>	<u>Priority</u>	<u>Total Est. Cost 1973</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>After 1981</u>
S2	4	1,000				1,124						
S3	2	4,690			5,674							
I1	3	650				752						
I2	3	2,190				2,393						
I3	3	1,665				1,819						
I4	3	860				939						
I5	3	6,000				6,556						
I6	3	1,000				1,092						
I7	3	2,000				2,185						
Total		1,455,875	0	527,268	237,660	161,324	132,172	233,784	166,160	133,796	119,670	0

A P P E N D I X    B

# FIVE INPATIENT CENTERS

	Smallest Center	Median Center	Largest Center
Case load	612	619	1,220
Number of staff	42	69	149
Operating expenditures	217,000	329,000	805,000
Number of patient visits per day	46	71	352
Outpatients as percent of total case load	4%	54%	83%
Bed capacity	20	39	68
Bed occupancy	73%	75%	92%

# Operating Expenditures by Department for a One-Year Period

Department	Woodrow Wilson*	% of Total
Total Number of Staff	\$804,959	100
Service Departments		
Medicine	309,944	38.5
Nursing	33,632	4.1
Dormitory	56,453	7.2
Physical therapy	13,243	1.6
Occupational therapy	31,288	3.8
Preschool occupational therapy	9,297	1.1
Home service occupational therapy	---	0
Speech	---	0
Admissions	3,500	.4
Social service	3,377	.4
Group work	---	0
Recreation	---	0
Psychology	6,340	.7
Vocational evaluation	14,248	1.7
Vocational counseling	3,831	.4
Vocational training	18,630	2.3
Workshop	113,805	14.1
	---	0
Auxiliary Departments		
Dietary	296,271	36.8
Prosthetic and orthotic shop	158,351	19.6
Purchase of prosthetic devices	---	0
Patient welfare	21,856	2.7
Centeen	54,753	6.8
Transportation of patients	52,875	6.5
Fund raising	8,436	1.0
Research projects	---	0
Training projects	---	0
Other	---	0
Overhead Departments		
Administrative and general	198,744	24.6
Household and property	60,366	7.4
	138,376	17.2

\*Source: Basil J. F. Mott, Financing and Operating Rehabilitation Centers and Facilities.

# Operating Expenditures by Type of Expenditure for a One-Year Period

Type of Expenditure	Woodrow Wilson*	% of Total
Total Operating Expenditures	\$804,959	100
Personal Services		
Salaries and wages	437,628	54.36
Fringe benefits	434,915	54.0
Social security	2,713	.3
Workmen's Compensation.	0	0
retirement	2,713	.3
Health and life insurance	0	0
Other	0	0
Other Expenditures	367,331	45.6
Wages of workshop clients	0	0
Purchase of services, appliances, incidentals for patients	96,283	11.9
Food	92,786	11.5
Workshop supplies and materials	0	0
Other supplies and materials	115,249	14.3
Utilities and telephone	30,462	3.8
Repairs, maintenance, and automobile operation	13,805	1.7
Staff training, conventions, and meetings	1,425	.2
Public relations	0	0
Fund raising	0	0
Other	17,321	2.1

\*Source: Basil J. F. Mott, Financing and Operating Rehabilitation Centers and Facilities.

Operating and Capital Income by Type of Income for a One-Year Period

Type of Income	Woodrow Wilson*	% of Total
Total Income	\$907,623	100
Operating Income		
Self-support	850,183	93.7
Fees for service to patients	817,703	90.1
Sale of prosthetic, orthotic, and adaptive devices	655,789	72.2
Workshop sales	24,502	2.7
Sales of other products and materials	0	0
Meals served outpatients, staff, and guests	35,942	3.9
Transportation of patients	18,605	2.0
Other	1,165	.1
Subsidy	81,700	9.0
Contributions	32,480	3.5
United Fund and Community Chest grants	270	0
Other grants	0	0
Gain on securities and investments	32,210	3.5
	0	0
Capital Income		
Subsidy	57,440	6.3
Contributions	57,440	6.3
United Fund and Community Chest grants	2,994	.3
Other grants	0	0
Gain on securities and investments	54,446	6.0
	0	0

\*Source: Basil J. F. Mott, Financing and Operating Rehabilitation Centers and Facilities.



Income from Fees for Service to Patients  
by Source of Payment for a One-Year Period

Source of Payment	Woodrow Wilson*	% of Total
Total Income from Fees	\$655,789	100
Paid by Patient	66,138	10.1
Paid by Third Party	589,651	89.9
Insurance companies and self-insurers	19,115	2.9
Union health and welfare plans	8,513	1.3
Voluntary health agencies and foundations	6,205	.9
National Foundation	6,118	.9
Easter Seal Societies	0	0
United Cerebral Palsy Association	0	0
Other	87	0
Government agencies	555,302	84.7
Federal	690	.1
State vocational rehabilitation	543,454	82.8
State and local public welfare	6,375	.9
State crippled children	4,783	.7
Other State and local	0	0
Other	516	.1

\*Source: Basil J. F. Mott, Financing and Operating Rehabilitation Centers and Facilities.

A P P E N D I X   C

# APPLES

Year	No. of Trees	Production (in Bushels)	\$/Bu.	Cost of Maint.	Cost of Trees	\$ Yield	Total Cost	Profit
1	1000	0	2.50	440	1750.00	0	2190	-2,190
2	1000	0	2.57	462	175.00	0	637	-637
3	1000	0	2.65	485	87.50	0	572.5	-572
4	1000	1000	2.73	509	91.87	2730	601	2,129
5	1000	2000	2.81	534	96.46	5620	603	4,990
6	1000	3000	2.89	561	9.52	8670	570	8,100
7	1000	4000	2.98	589	9.99	11,920	599	11,361
8	1000	5000	3.07	619	10.49	15,350	629	14,721
9	1000	5000	3.16	650	11.02	15,800	661	15,139
10	1000	5000	3.26	682	11.57	16,284	693	15,591
11	1000	5000	3.35	716	12.15	16,773	728	16,045
12	1000	5000	3.46	752	12.75	17,276	764	16,512
13	1000	5000	3.56	790	13.39	17,794	803	16,991
14	1000	5000	3.67	829	14.06	18,328	843	17,485
15	1000	5000	3.78	871	299.30	18,878	1170	17,708
16	1000	5000	3.89	914	314.26	19,444	1228	18,216
17	1000	5000	4.01	960	329.97	20,028	1290	18,738
18	1000	5000	4.13	1008	346.47	20,629	1354	19,275
19	1000	5100	4.25	1058	363.80	21,675	1422	20,253
20	1000	5300	4.38	1111	381.99	23,214	1492	21,722

Note: 200 trees/acre on 5 acres  
 1000 bu/acre  
 \$2.50/bu  
 \$1.75/tree

ag prices 3%/yr. inflation  
 all costs 5%/yr. inflation

# CHRISTMAS TREES

ar	No. of Trees	Yield	\$ Price	\$ Yield	Cost of Trees	Maint. Cost	Total Cost	Profit
	6,000	0	5.00	0	480	380	860	-860
	12,000	0	5.25	0	504	399	903	-903
	18,000	0	5.50	0	529	419	948	-948
	24,000	600	5.75	3,450	555	439	994	2,456
	30,000	1200	6.00	7,800	583	461	1044	6,756
	36,000	2440	6.30	15,372	612	485	1097	14,275
	36,000	4840	6.70	32,428	643	509	1152	31,276
	36,000	6000	7.00	42,000	675	534	1209	40,791
	36,000	6000	7.30	43,800	709	561	1270	42,530
	36,000	6000	7.75	46,500	744	589	1333	45,167
	36,000	6000	8.00	48,000	781	618	1399	46,601
	36,000	6000	8.50	51,000	820	650	1470	49,530
	36,000	6000	9.00	54,000	862	682	1544	52,456
	36,000	6000	9.50	57,000	905	716	1621	55,379
	36,000	6000	10.00	60,000	950	752	1702	58,298
	36,000	6000	10.50	63,000	997	789	1786	61,214
	36,000	6000	11.00	66,000	1047	829	1876	64,124
	36,000	6000	11.50	69,000	1100	870	1970	67,030
	36,000	6000	12.00	72,000	1155	914	2069	69,931
	36,000	6000	12.50	75,000	1212	960	2172	72,828

PEACHES

Year	No. of Trees	Prod. /Bu.	Price	Yield	Cost of Material	Cost of Trees	Profit
1	750	0	3.00	0	465.00	1200.00	-1,665.00
2	750	0	3.06	0	474.30	64.00	-538.00
3	750	500	3.12	1,560.00	483.78	65.26	1,011.94
4	750	1500	3.18	4,770.00	493.46	66.58	4,209.96
5	750	3750	3.24	12,150.00	503.33	67.91	11,578.76
6	750	3750	3.31	12,412.50	513.39	69.27	11,829.84
7	750	3750	3.37	12,637.50	523.66	70.66	12,043.18
8	750	3750	3.44	12,900.00	534.13	72.07	12,293.80
9	750	3750	3.51	13,162.50	544.82	73.51	12,544.17
10	750	3750	3.50	13,425.00	555.71	74.98	12,794.31
11	750	3750	3.65	13,687.50	566.83	76.48	13,044.19
12	750	3750	3.73	13,987.50	578.16	78.01	13,331.33
13	750	3750	3.80	14,250.00	589.73	79.57	13,580.70
14	750	3750	3.88	14,550.00	601.52	81.16	13,867.32
15	750	3750	3.95	14,812.50	613.55	82.79	14,116.16
16	750	3750	4.03	15,112.50	625.82	84.44	14,402.24
17	750	3750	4.11	15,412.50	638.34	86.13	14,688.03
18	750	3750	4.20	15,750.00	651.11	87.85	15,011.04
19	750	3750	4.28	16,050.00	664.13	89.61	15,296.26
20	750	3750	4.37	16,387.50	677.41	91.40	15,618.69
21	750	3750	4.45	16,687.50	690.96	93.23	15,903.31
22	750	3750	4.54	17,025.00	704.78	95.10	16,225.12
23	750	3750	4.63	17,362.50	718.88	97.00	16,546.62
24	750	3750	4.73	17,737.50	733.25	98.94	16,905.31
25	750	3750	4.82	18,075.00	747.92	100.92	17,226.16

# STRAWBERRIES

Year	Materials	Plants	Total Cost	Quarts	Price (¢)	\$Yield	Profit
1	40	962	1002	0	35	0	-1,002
2	50	981	1031	24,000	36	8,640	7,609
3	60	1000	1060	48,000	37	17,760	16,700
4	70	1020	1090	72,000	38	27,360	26,270
5	71	1040	1111	72,000	39	28,080	26,969
6	73	1061	1134	72,000	40	28,800	27,666
7	75	1182	1157	72,000	41	29,520	28,363
8	77	1205	1282	72,000	42	30,240	28,960
9	79	1229	1308	72,00	43	30,960	29,652
10	81	1253	1334	72,000	44	31,680	30,346
11	83	1278	1361	72,000	45	32,400	31,039
12	85	1303	1388	72,000	46	33,120	31,732
13	87	1329	1416	72,000	47	33,840	32,424
14	89	1355	1444	72,000	48	34,560	33,116
15	91	1382	1473	72,000	49	35,280	33,807
16	93	1409	1502	72,000	50	36,000	34,498
17	95	1437	1532	72,000	51	36,720	35,188
18	97	1465	1562	72,000	52	37,440	35,878
19	99	1494	1593	72,000	55	38,160	36,567
20	101	1524	1625	72,000	54	38,880	37,255

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